

Claims

1. Battery sheath made of formed cold-rolled sheet metal, which is provided at least on its inside with a coating produced by electroplating containing Ni, Co, Fe, Sn, In, Pd, Bi and/or their alloys  
**characterized in that**  
to reduce the internal resistance of the future battery, electrically conductive particles are embedded in dispersed form in the electroplated coating, for example, elemental carbon in the form of fine carbon, graphite or carbon black or, for example, titanium disulfide, tantalum disulfide or molybdenum silicide or mixtures thereof.
2. Battery sheath according to Claim 1 characterized in that the carbon content of the electroplated coating is 0.7% to 15%.
3. Battery sheath according to Claim 1 or Claim 2 characterized in that the thickness of the electroplated coating is 0.2  $\mu\text{m}$  to 8  $\mu\text{m}$  on one or on both sides.
4. Process for manufacturing strip stock for battery sheaths in which 0.1 to 1 mm thick cold-rolled sheet metal is provided on at least one side with a coating of Ni, Co, Fe, Sn, In, Pd, Bi and/or their alloys in an electroplating bath, whereby the electroplating bath comprises as an additional component electrically conductive particles such as, for example, elemental carbon as fine carbon, graphite or carbon black or, for example, titanium disulfide, tantalum disulfide or molybdenum silicide, whereby this/these component(s) is/are deposited on the base material during electroplating together with Ni, Co, Fe, Sn, In, Pd, Bi or their alloys.
5. Process according to Claim 4 characterized in that the sheet metal side with the electroplating coating provided with the electrically conductive components faces inwardly when the sheet metal is formed into a battery sheath.
6. Process according to Claim 3 or Claim 4 characterized in that the carbon is suspended in the electroplating bath as finely distributed carbon, graphite, or carbon black particles.

7. Process according to Claim 6 characterized by a particle size of the carbon, graphite, or carbon black particles of 0.5  $\mu\text{m}$  to 15  $\mu\text{m}$ .
8. Process according to one of the preceding claims characterized in that a uniform flow is produced in the electroplating bath during the electroplating process.
9. Process according to Claim 8 characterized in that the uniform flow is produced by mechanical agitation, circulation, or flooding.
10. Process according to Claim 8 or Claim 9 characterized by a forced flow velocity of the electrolyte of 6 to 10 m/s.
11. Process according to one of Claims 8 to 10 characterized in that the electroplating bath contains suspension stabilizing and/or coagulation reducing substances.
12. Process according to one of the preceding claims characterized in that the electroplating bath comprises substances that result in hard brittle coatings (so-called brighteners).
13. Process according to one of Claims 1 to 12 characterized in that the electroplating bath comprises brightening or pore avoiding agents.
14. Process according to one of the preceding claims characterized in that electroplating deposition is carried out in several stages and that the electroplating bath contains elemental carbon in at least one of these stages.
15. Process according to Claim 14 characterized in that the material is heat-treated or annealed between electroplating treatment stages.
16. Process according to Claim 14 characterized in that the material is heat-treated, particularly annealed, at the end of the electroplating treatment stages.